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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,277	09/14/2006	Hans-Peter Merkel	034193-031	4038
21839 7590 04/08/2008 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				
EXAMINER				
STEVENS, THOMAS H				
ART UNIT		PAPER NUMBER		
2121				
NOTIFICATION DATE		DELIVERY MODE		
04/08/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary

Application No.

10/552,277

Applicant(s)

MERKEL ET AL.

Examiner

THOMAS H. STEVENS

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 10/04/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-17 were examined.

Abstract

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;

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(4) if a mixture, its ingredients;

(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

3. The abstract of the disclosure is objected to because it's not in the proper format.

Correction is required. See MPEP § 608.01(b).

Claim Interpretation

4. Office personnel are to give claims their "**broadest reasonable interpretation**" in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551(CCPA 1969). See *also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322(Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow") The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be

removed, as much as possible, during the administrative process. The disclosure defines the first and second interface connections as electrical, optical or wire-free interfaces on page 6, lines 11-15 and 26-29.

Claim Objections

5. Claim 16 is objected to because of the following informalities: the term "appropriate" can be interpreted as indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-16 are directed to a switchgear assembly module. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete and tangible result.

Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having real world value rather than a result that may be interpreted to be abstract in nature as, for example, a thought, a computation, or manipulated data. More specifically, the claimed subject matter provides for functional language of the switchgear assembly but fails to

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provide a clear application specific result. This produced result remains in the abstract and, thus, fails to achieve the required status of having real world value.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-16 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure is silent to the specifics of these "protective functions" and how they're advantageous to the process.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-7,10-12 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
12. Claim 1 recites the limitation "the outgore" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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13. Claim 11 recites the limitation "the real power supplied" in line 4. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 11 recites the limitation "the load" in line 4. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 11 recites the limitation "the wattless" in line 4. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 11 recites the limitation "the power factor" in line 5. There is insufficient antecedent basis for this limitation in the claim.

17. Claim 11 recites the limitation "the mains frequency" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 12 recites the limitation "the external interface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

19. Claim 17 recites the limitation "the aid" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Heidues (US Patent 6,032,203; hereafter Heidues). Heidues discloses an interface system for a switchgear and motor control center (abstract).

Claim 1. A switchgear assembly module (column 2, lines 46-48) for controlling and monitoring at least one electrical load in the outgoer of a low-voltage (runs either serial cable or optical I/O which operate on low-voltage, column 10, lines 65-68) switchgear assembly, (column 2, lines 46-48) having at least one communication interface (runs either serial cable or optical I/O, column 10, lines 65-68) for connection to a bus system ("field bus data", column 4, lines 63-64), having a programmable controller and having configurable protective functions ("customer specific for the individual protection field devices as entered via Application port..." column 7, lines 51-55), wherein the switchgear assembly module (column 2, lines 46-48) is formed from interchangeable components ("interchangeable sets", column 2, lines 47-48) and has at least one central unit (appears to be the PLC A350, figure 1) as well as at least one bus connection unit ("field bus data", column 4, lines 63-64) with a communication interface, (runs either serial cable or optical I/O, column 10, lines 65-68) additional connection slots (slot representative of serial cable or optical I/O, column 10, lines 65-68) are provided for holding at least one power unit (indicated the process control system has electric power, column 1, line 36) and at least one input/output unit (column 10, line 63), and an internal bus (figure 1, element 400 "field bus") is provided for communication from the central unit (appears to be the PLC A350, figure 1) with the other components (not defined what other components are; e.g., "computer" figure 8, element 40) which are located in the switchgear assembly module (column 2, lines 46-48).

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Claim 2. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 1, wherein the central unit (appears to be the PLC A350, figure 1) has a programmable control and configurable protective functions ("customer specific for the individual protection field devices as entered via Application port..." column 7, lines 51-55), and wherein an external interface is provided for connection of a control/configuration unit or of a programmer.

Claim 3. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 2, wherein the external interface is an electrical, optical or wire-free interface.

Claim 4. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 1, characterized in that an input/output unit (column 10, line 63) has binary inputs, binary outputs, analogue inputs, analogue outputs or a combination thereof.

Claim 5. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 1, wherein the at least one bus connection ("field bus data", column 4, lines 63-64) unit together with one or more further bus connection units ("field bus data", column 4, lines 63-64) that are provided and/or one or more input/output units (column 10, line 63) that are provided forms an interface unit

Claim 6. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 1, wherein a power unit (indicated the process control system has electric power, column

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1, line 36)has an outgoer section, a feed section, a measurement device and a processing unit.

Claim 7. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 6, wherein a power unit (indicated the process control system has electric power, column 1, line 36)additionally has a main switching device (suggestion of a switch regarding the supply data of the control system, column 2, lines 7-9)and/or a switch disconnecter.

Claim 8. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 6, wherein the measurement device has one or more sensors (column 1, line 52) for current measurement, and/or for voltage measurement and/or for temperature measurement.

Claim 9. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 8, wherein the measurement device has further sensors (column 1, line 52) for measurement of further environmental variables (term is unclear; Office equates this as data structures relative to this particular art, column 37-40 "current outputs" and "voltages outputs").

Claim 10. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 7, wherein the processing unit is an electronic circuit and has inputs for reading the values measured by the measurement device, and/or inputs for reading a position

message from the main switching device (suggestion of a switch regarding the supply data of the control system, column 2, lines 7-9)and/or from the switch disconnecter and/or other status messages and/or outputs for driving the main switching device (suggestion of a switch regarding the supply data of the control system, column 2, lines 7-9)and/or the switch disconnecter and/or other appliances.

Claim 11. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 10, wherein the processing unit has means in order to use the currents and voltages read by the measurement device to calculate the real power supplied to the load, the wattless component supplied to the load, the volt-amperes supplied to the load, the power factor and the mains frequency.

Claim 12. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 2, wherein the control/configuration unit has a first interface ("optical I/O port" see claim interpretation for explanation)for connection to the external interface of the central unit, as well as visual indications and/or switches and/or keys.

Claim 13. The switchgear assembly module (column 2, lines 46-48) as claimed in claim 12, wherein the first interface ("optical I/O port" see claim interpretation for explanation)is an electrical, optical or wire-free interface.

Claim 14. The switchgear assembly module (column 2, lines 46-48)as claimed in claim

12, wherein the control/configuration unit has a second interface ("optical I/O port" see claim interpretation for explanation)for connection of a programmer.

Claim 15. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 14, wherein the second interface ("optical I/O port" see claim interpretation for explanation)is an electrical, optical or wire-free interface.

Claim 16. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 2, wherein a standard PC with an appropriate programming interface, or a standard PDA with an appropriate programming interface is provided as the programmer.

Claim 17. The switchgear assembly module (column 2, lines 46-48)as claimed in claim 2, wherein the central unit (appears to be the PLC A350, figure 1)has an integrated web server, which allows programming of the programmable controller and/or configuration of the protective functions ("customer specific for the individual protection field devices as entered via Application port..." column 7, lines 51-55), and/or control of the switchgear assembly module (column 2, lines 46-48)with the aid of a standard web browser installed in the programmer.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure:

- US Patent Application 2004/0036461 discloses a method for operating an electrical apparatus includes mounting an instrument transformer proximate a load current carrying conductor, wherein the instrument transformer includes a current transformer for supplying an analog input signal proportional to a load current, the current transformer is coupled to a relay front-end module that includes a current-to-voltage converter circuit and is configured to couple to a remote protection module, converting the analog input signal to a digital input signal, transmitting the digital input signal to the remote protection module; and activating contacts to operate the electrical apparatus based on the digital input signals.
- Trase et al., "Description of the PMAD System Test Bed Facility and Data System" 1992 NASA Lewis Research Center, pg. 3-7: discloses a fabrication and assembly process for electrical power-based systems.
- Watson et al., "Single-Chip Microcontrollers for Switchgear Control" 1991 Texas A & M pg.122-127: discloses a switchgear controller utilizing a microcontroller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Tom Stevens whose telephone number is 571-272-3715.

If attempts to reach the examiner by telephone are unsuccessful, please contact examiner's supervisor Mr. Albert Decady (571-272-3819). The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Answers to questions regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) (toll-free (866-217-9197)).

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